

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**Claim 1.** (Canceled)

**Claim 2.** (Canceled)

**Claim 3.** (Canceled)

**Claim 4.** (Canceled)

**Claim 5.** (Previously Presented) The method of Claim 10 wherein said native tissue to be treated is soft tissue including vascular vessel, heart valve, heart sac, cornea, amnion and dura.

**Claim 6.** (Canceled)

**Claim 7.** (Previously Presented) The method of Claim 10 wherein said native tissue to be treated is an organ or part thereof including heart, kidney, liver, pancreas, brain and part thereof.

**Claim 8.** (Previously Presented) The method of Claim 10 further comprising the step of washing said tissue with a fresh washing liquid following said irradiation step to remove destructed donor cells.

**Claim 9.** (Previously Presented) The method of Claim 10 wherein said native tissue to be treated has been pre-treated to facilitate the removal of donor cells.

**Claim 10.** (Currently Amended) A method of decellularizing native tissue of mammalian origin comprising irradiating with microwaves at a frequency of 2450 MHz for a net

period of time of at least 1 hour, tissue immersed in a treating solution containing a detergent while maintaining the temperature of the tissue in the range between 0°C and 40°C, until essentially no residual cell nuclei are observed on microscopic examination of the tissue whereby cellular components are removed from said tissue.

**Claim 11. (Previously Presented)** The method of Claim 10 wherein said tissue is immersed in said treating solution received in a microwave-transmitting container which, is, in turn, in heat-exchange contact with a coolant liquid received in a microwave-transmitting vessel, and wherein said tissue is irradiated with microwaves in a microwave oven while circulating said coolant liquid through a cooling apparatus provided externally of the microwave oven.

**Claim 12. (New)** A method of decellularizing native tissue of mammalian origin comprising irradiating with microwaves tissue immersed in a treating solution containing a detergent, while maintaining the temperature of the tissue in the range between 0°C and 40°C, whereby complete decellularization of the tissue is effected.